January 30, 2018

Hon. Ajit Pai, Chairman
Hon. Mignon Clyburn, Commissioner
Hon. Michael O'Rielly, Commissioner
Hon. Brendan Carr, Commissioner
Hon. Jessica Rosenworcel, Commissioner
Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Re: GN Docket No. 17-258, Promoting Investment in the 3550-3700 MHz Band

Dear Chairman Pai, Commissioner Clyburn, Commissioner O'Rielly, Commissioner Carr, and Commissioner Rosenworcel,

Revolutionary changes in wireless technology are poised to remake the way we live, work and do business -- transforming everything from broadband access, transportation and infrastructure to education, business, and public safety. But this future relies on a limited resource: airwaves. We the undersigned are a group of companies, organizations and communities that are heavily invested — and investing — in the technologies and solutions for the future. From connected agriculture companies to manufacturers dependent on the industrial Internet of Things (IioT), from rural broadband providers and communities, to hotels and venues: our demand for spectrum is large and growing. And we all agree that the Federal Communications Commission can and should help America achieve that wireless future by maintaining the flexible and innovative rules it approved in 2015 for the Citizens Broadband Radio Service (CBRS) in the 3.5 GHz band. Specifically, we urge the Commission to retain census tracts as the geographic area for all seven Priority Access Licenses (PALs) and to otherwise ensure that a broad variety of use cases have the opportunity to competitively bid for PALs consistent with the existing CBRS framework.

Each of the companies and industries represented by the signatories below has a vision of a better, more connected, and more efficient future that we are trying to unleash, and each of these visions requires rules that support wireless innovation beyond the "big four" cellular companies. We believe that this wireless, hyper-connected future -- commonly referred to as 5G -- will be technologically diverse and championed by numerous innovative, non-traditional commercial participants in wireless. It should not be confined to the specific business model preferred by the big four carriers.

In 2015, the FCC took the opportunity to do something innovative in the hopes of improving broadband deployments in rural areas, closing the digital divide, and promoting spectrum use by a wide range of users with diverse and innovative business models. For the first time ever, spectrum licenses would be available for small geographic areas and for short lengths of time. As a result, businesses, broadband providers and communities that don't have access to

billions, or even millions, of dollars to buy traditional, exclusive, long-term spectrum licenses will be able to bid competitively for access to this invisible infrastructure. The opportunities for innovation and investment are exciting to imagine.

But proposed changes threaten the increased capacity for innovation that the original rules created. The contemplated changes to the CBRS rules, especially the potential extension of the terms of PALs from three to ten years, with expected renewability, and expanding PAL sizes from census tracts to larger Partial Economic Areas, would create the same prohibitively costly system that exists in other, traditionally licensed bands, and would exclude the non-traditional, innovative actors that have been so interested in the band since its inception. In fact, changes like those contemplated would strand the investments that many of us have already made in the band, which were made in reliance on the current rules, to serve targeted communities and use cases that do not require large areas or long license terms. Not only would this be disastrous for these companies, but it would certainly forestall future cutting-edge investments, including in 5G technology and the IIoT, and preclude access by any users, other than the largest national carriers.

The time to finalize these rules is now. We've now moved beyond mere imagination: in just three years, our industries have come together and spent thousands of hours and invested millions of dollars in new technologies to get ready for business: developing certification procedures and standards; planning network deployments; conducting technology and market trials; launching service in the adjacent band in reliance on the new rules; and trialing business opportunities for wireless broadband systems with LTE-speeds. A few examples:

- Wireless Internet Service Providers (WISPs) have a long-standing interest in this spectrum to serve their rural customers. Many WISPs have made significant investments and deployments in reliance on the rules adopted in 2015. America's largest WISP, Rise Broadband reports that it has invested $10 million dollars in the 3650-3700 MHz band that is enabling access by more than 12,000 customers. It also has made significant investments in support of its $16.9 million in Rural Broadband Experiment funding. CBRS offers unprecedented opportunities to connect rural Americans, 23 million of whom lack broadband access and are prevented from realizing the full benefits of the digital economy. Many WISPs have already curtailed investment based on the threat of new rules that will essentially block their opportunity to bid for protected spectrum.
- Industrial and critical-infrastructure entities and other enterprises plan to use licensed CBRS spectrum to self-provision IIoT wireless connectivity over geographically tailored, private LTE networks. Relying on advancements in inspection/monitoring technology and predictive analytics, self-provisioned private LTE networks will promote innovation, lower costs, improve security and safety, and optimize system performance for these entities. In particular, utilities will use the 3.5 GHz band for additional capacity to monitor and control the safe, reliable and efficient delivery of essential, electric, gas and water services to the public at large.

- Several companies are working to develop products that will deliver robust, in-home LTE network services — which mobile operators can use to extend coverage and add capacity for their consumers.
- Venues like sports stadiums can deploy LTE networks indoors regardless of who the consumers' network operator is, without deploying network equipment for each provider, which is cost prohibitive. Equipment manufacturers have developed products that would let enterprises, venues and the hospitality industry deploy LTE networks in their facilities that would work with customers' existing mobile phones.
- A group of companies has worked collaboratively to successfully develop virtual reality content provision for stock car racing.
- Chipmakers are working on technology to coordinate and integrate wireless communications — from LTE to Wi-Fi — which would be a boon for community anchor institutions like schools and libraries that depend on low cost Wi-Fi connections.

These are just some of the examples of how we've already invested in the current CBRS framework. Companies are poised to roll out even more innovative technologies and plans, but need regulatory certainty before these innovations can become reality. The undersigned seek to revolutionize our respective industries and enhance the experiences of our customers across America; we simply ask the FCC not to break the CBRS framework that's already working for both industry and consumers.

Simply put, for many of us, CBRS will allow us to develop our own networks and deploy technologies that will improve the experiences of our customers and connect the unconnected in rural America. CBRS is ready for business, and we are here to tell you that business is ready for CBRS. We implore you to reject proposals to fundamentally change the priority access tier, so that the CBRS band can fulfill its promise of bringing spectrum to benefit non-traditional users, and to allow companies like ours to innovate and ensure American leadership in the future of wireless technology.

Sincerely,

325 Internet, LLC
360 Communications, Inc
432 Internet, LLC
Acadiana Wireless, LLC
AcelaNet, LLC
Advanced Wireless
Air Link Rural Broadband, LLC
Airfiber WISP LLC
AirLink Internet Services
AlignTec Incorporated
All Points Broadband
Alliance Internet Communications, LLC
Aloha Broadband Inc.
Alsat Wireless
Alyrica Networks, Inc.

Amplex
Arbuckle Communications, LLC
Aristotle Unified Communications
Baicells North America, Inc.
Bernhardt Communications Company
Bits of Technology Wireless Internet LLC
Blast Communications, Inc.
Blue Spring Broadband
Bluespan Wireless
Bolt Internet
Bresco Broadband
BridgeNet Communications
Broadband VI
Bspeedy Wireless Inc
Byhalia.net, LLC
Cairo Public Utility Company/Lazernet, Inc
Cal.Net, Inc.
Cambium Networks, LTD.
Celerity Networks LLC
CellTex Networks, LLC
Clifton Communications, LLC
Cloud Alliance LLC
CMS Internet LLC
Convergence Technologies, Inc
Crossroads WiFi
CTI Connect
Cyber Broadband Inc
Digital Development Corp.
DM-TECH INC.
DMCI Broadband, LLC
DSLbyAir, Inc
Eastern Carolina Broadband LLC
Eastern Indiana WIFI, Inc.
Eastern Oregon Net, Inc.
EBTX Wireless, LLC
ECSIS.NET, LLC
Ethoplex
Excel.Net, Inc.
Fast Forward Broadband LLC
First Step Internet, LLC
Florida High Speed Internet
Fourway Computer Products, Inc.
General Electric
Google
Grand Avenue Broadband
Grand County Internet Services Inc
High Speed Link
Hewlett Packard Enterprise
Hudson Valley Wireless
Imagine Networks
Impulse Advanced Communications

InfoWest, Inc
Intermax Networks
Internet Communications Inc.
Internet Management Services, Inc.
InvisiMax Inc.
IPpay, LLC
Kentucky Wimax
KWISP Internet
LANN COMMUNICATIONS CORP
Link Technologies, Inc.
Locl.Net, Inc
LR Communications
LTD Broadband, LLC
MCM Systems
McMinnville Access Company
Meridian Solutions, LLC
MetaLINK Technologies, Inc.
Metro Wireless International Inc.
Michwave Technologies, Inc.
Micrologic Inc.
Mid-States Services, LLC.
Mimbres Communications, LLC
Minnesota WiFi
MitoTec, LLC
netBlazr Inc.
New Lisbon Broadband and Communications, LLC
New Wave Net Corp.
NexGenAccess Inc.
NEXTLINK
NGL Connection LLC
NGN Connect
Northwest Ohio Broadband LLC
OACYS Technology
OmniPoint Technology, Inc.
PennWisp, LLC
Phoenix Broadband, LLC
Plains Internet
PogoZone Internet Solutions
Point Broadband
Port Networks, Inc.
Port of Los Angeles
Portative Technologies
Provalue.net
Rapid Systems, Inc.
RidgeComms
Rio Cities Internet
Rise Broadband
River Canyon Wireless
River Valley Internet
Royell Communications, Inc.
RTC Communications Corp

Rural Texas Broadband
RuralReach.com
Sandhills Wireless, LLC
Select Spectrum
Shelby Broadband
ShoreWaves LLC
SITCO, LLC
SJP Network Solutions
SkyHi Broadband
Slopeside Internet
SmartBurst LLC.
Snappy Internet & Telecom
Snow Cloud Services LLC
Solano Wireless Internet
SonicNet, Inc. (Wisconsin)
Southern Internet Communications, Inc.
Southern LINC
Southern Ohio Communication Services Inc
SPITwSPOTS, Inc
StarMax Corporation
Starry, Inc.
StraightUpNet LLC
STT Rural Net
Succeed, Inc
Surf Air Wireless, LLC
TerraNovaNet, Inc.
Texoma Communications, LLC
TG Ferguson Company, Inc.
Tnet Broadband Internet, LLC
Triad Wireless, LLC
Union Pacific
Utilities Technology Council
Valnet Holdings, LLC
Veopoint Internet
Verona Networks
Verso Networks
Vistabeam
Wave Wireless
Wavelinc Communications LLC
Webjogger Internet Services
West Michigan Wireless ISP
WIFI Midwest, Inc.
WiLogic, Inc.
Wired or Wireless, Inc. dba AIR-PIPE
Wireless Data Net, LLC
Wireless ETC
WISP Partners, Inc.
Wonderlink Communications, LLC
WPS, Inc.
ZIRKEL Wireless

CC:
Grace Koh, Special Assistant to the President for Technology, Telecom, and Cyber-Security Policy
The Hon. David Redl, Assistant Secretary for Communications and Information at the Department of Commerce in November 2017, Administrator of the National Telecommunications and Information Administration (NTIA)